

IN THE CLAIMS

1. (Original) A variant archaeal DNA polymerase having a modified amino acid sequence of a wild-type amino acid sequence, the modified sequence being in the amino-terminal amino acids that comprise a uracil-binding pocket in the wild-type polymerase whereby the variant polymerase has reduced affinity for uracil than the wild-type polymerase.
2. (Cancelled)
3. (Previously presented) The variant archaeal DNA polymerase according to claim 1 having a modified amino acid sequence of wildtype *Pyrococcus furiosus* DNA polymerase (Pfu-Pol).
4. (Previously presented) The variant archaeal DNA polymerase according to claim 3 having modifications in amino acids 1-40 or amino acids 78-130.
5. (Previously presented) The variant archaeal DNA polymerase according to claim 4 of SEQ ID NO.2 having modifications to amino acids 7, 36, 37, 90-97 or 112-119.
6. (Currently amended) The variant archaeal DNA polymerase according to claim 5 having modifications to amino acids ~~Y7, Y37, V93, H14 or P115~~.
- 7-8. (Cancelled)
9. (Previously presented) The variant archaeal DNA polymerase according to claim 5 wherein the modification is V93Q.
10. (Previously presented) The variant archaeal DNA polymerase according to claim 5 wherein the modification is V93R.
- 11-22. (Cancelled)
23. (Previously presented) The variant archaeal DNA polymerase according to claim 1 having modifications in the amino acid motif of SEQ ID NO:33: E - - I - F/Y- - - Y- - D.
- 24-25. (Cancelled)
26. (Previously presented) A kit useful for polymerase chain reactions comprising a variant archaeal DNA polymerase as defined in claim 1.
27. (Previously presented) The kit of claim 26, further comprising DNA to be amplified, free bases, primers and combinations thereof.